Claims:

1. A medical implant for use in a lumen or void of a body of a patient comprising:

a pharmaceutically acceptable covalently crosslinked hydrogel polymerized from at least one macromer, the hydrogel having a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 50% after swelling with physiological fluid and having a shape to occlude the lumen or void upon swelling from exposure to a fluid from the body after implantation in the lumen or void.

2. The implant of claim 1 wherein the volumetric expansion is between about 50% and about 700%.

3. The implant of claim 1 wherein the volumetric expansion is between about 100% and about 500%.

4. The implant of claim 1 wherein the volumetric expansion is between about 150% and about 400%.

5. The implant of claim 1 wherein the hydrogel is biodegradable.

6. The implant of claim 1 wherein the hydrogel comprises a crosslinked natural polymer.

7. The implant of claim 6 wherein the crosslinked natural polymer is a protein.

8. The implant of claim 7 wherein the protein is albumin.

9. The implant of claim 6 wherein the crosslinked natural polymer is a polysaccharide.

10. The implant of claim 6 wherein the polysaccharide is hyaluronic acid.

11. The implant of claim 1 wherein the fluid from the body is blood.

12. The implant of claim 1 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

13. The implant of claim 1 wherein the shape is a member of the group consisting of rods, spheres, blocks, sheets, tubes, and irregularly shaped particles.

14. The implant of claim 1 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

15. The implant of claim 14 wherein the hydrogel is biodegradable.

16. The implant of claim 1 wherein the hydrogel comprises at least a portion that is biphasic.

17. The implant of claim 1 the hydrogel comprises a hydrophobic liquid or a gas.

18. The implant of claim 1 wherein the hydrogel comprises bubbles.

19. The implant of claim 17 wherein the bubbles comprise air, carbon dioxide, and mixtures thereof.

20. The implant of claim 1 wherein the lumen or void is created by a biopsy procedure.

21. The implant of claim 1 wherein the lumen or void is created by a needle.

22. The implant of claim 1 wherein the lumen or void is a member of the group consisting of a naturally occurring body passageway, a fallopian tube, an arteriovenous malformation, and a bone canal.

23. The implant of claim 1 wherein the shape, before hydration by physiological fluids, is suitable to be deployed through a lumen of a catheter.

24. The implant of claim 1 wherein the macromer, before polymerization, comprises a functional group polymerizable by a polymerization reaction that is a member of the group consisting of free radical, condensation, anionic, cationic.

25. The implant of claim 1 wherein the hydrogel comprises macromers polymerized by an electrophile-nucleophile reaction.

26. The implant of claim 24 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

27. The implant of claim 24 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

28. The implant of claim 24 wherein the shape, before hydration by physiological fluids, is to be deployed through a lumen of a catheter.

29. The implant of claim 24 wherein the hydrogel comprises at least a portion that is biphasic.

30. The implant of claim 1 wherein the hydrogel further comprises a hydrophobic agent.

31. The implant of claim 30 wherein the hydrophobic agent is present as a dispersion or suspension in the hydrogel.

32. The implant of claim 30 wherein the hydrophobic agent is water-immiscible.

33. The implant of claim 32 wherein the water-immiscible agent is an oil.

34. The implant of claim 30 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

35. The implant of claim 30 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

36. The implant of claim 30 wherein the shape, before hydration by physiological fluids, is to be deployed through a lumen of a catheter.

37. The implant of claim 1 wherein the hydrogel further comprises a therapeutic bioactive molecule.

38. The implant of claim 37 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.

39. The implant of claim 1 wherein the hydrogel further comprises a contrast agent.

40. The implant of claim 39 wherein the contrast agent is a radio-opaque contrast agent.

41. A medical implant for use in a lumen or void of a body that is created by a percutaneous catheter puncture comprising:

a pharmaceutically acceptable covalently crosslinked hydrogel polymerized from

at least one macromer, the hydrogel having a shape and a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 50% in physiological fluid to occlude the lumen or void created by the percutaneous catheter puncture after swelling with fluid from the body.

42. The implant of claim 41 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

43. The implant of claim 41 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

44. The implant of claim 41 wherein the hydrogel is biodegradable.

45. The implant of claim 41 wherein the hydrogel further comprises a therapeutic bioactive molecule.

46. The implant of claim 45 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.

47. The implant of claim 41 wherein the hydrogel further comprises a contrast agent.

48. The implant of claim 41 wherein the volumetric expansion is between about 50% and about 700%.

49. The implant of claim 41 wherein the volumetric expansion is between about 100% and about 500%.

50. The implant of claim 41 wherein the volumetric expansion is between about 150% and about 400%.

51. The implant of claim 41 the hydrogel comprises a hydrophobic liquid or a gas.

52. The implant of claim 41 wherein the hydrogel comprises at least a portion that is biphasic.

53. A medical implant for use in a lumen or void of a body of a patient comprising:

a sterilized covalently crosslinked biodegradable hydrogel polymerized from at least one macromer, the hydrogel having a shape for passage through an inner diameter of a catheter or hollow needle into the body, and having a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 20% in physiological fluid to occlude the lumen or void after swelling with a fluid from the body.

54. The implant of claim 53 wherein the hydrogel further comprises a contrast agent.

55. The implant of claim 53 wherein the hydrogel comprises at least a portion that is biphasic.

56. The implant of claim 53 wherein the hydrogel further comprises a hydrophobic agent.

57. The implant of claim 56 wherein the hydrophobic agent is present as a dispersion or suspension in the hydrogel.

58. The implant of claim 56 wherein the hydrophobic agent is water-immiscible.

59. The implant of claim 58 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

60. The implant of claim 58 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

61. The implant of claim 53 wherein the hydrogel comprises at least a portion that is biphasic.

62. The implant of claim 53 wherein the hydrogel comprises bubbles.

63. The implant of claim 62 wherein the bubbles comprise air, carbon dioxide, and mixtures thereof.

64. The implant of claim 53 wherein the lumen or void is created by a biopsy procedure.

65. The implant of claim 53 wherein the volumetric expansion is between about 50% and about 700%.

66. The implant of claim 53 wherein the volumetric expansion is between about 100% and about 500%.

67. The implant of claim 53 wherein the volumetric expansion is between about 150% and about 400%.

68. The implant of claim 53 further comprising a therapeutic bioactive molecule.

69. The implant of claim 68 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.